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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/006,777	01/14/98	HOOGENBOOM	C 100-010

WM01/0131
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EXAMINER

ART UNIT	PAPER NUMBER
2663	4

DATE MAILED:

01/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/006,777

Applicant(s)

Hoogenboom et al.

Examiner

Jasper Kwok

Group Art Unit

2663



☒ Responsive to communication(s) filed on Jan 14, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-32

Of the above, claim(s) _____ is/are pending in the application.

☐ Claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 1-32 is/are allowed.

☐ Claim(s) _____ is/are rejected.

☐ Claims _____ is/are objected to.

_____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: page 13, line 19, "Output control 560", should be correct to "Input control 560."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

3. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ramamurthy et al.

Regarding claims 1 and 10, Ramamurthy et al. disclose a switch comprising a plurality of input ports (i.e. fig. 1, 100); a plurality of output ports (i.e. fig. 1, output buffer); and switch fabric (i.e. fig. 1, buffered switch, core switch bus, core switch LSI); wherein the data stores are arranged to buffer data units (i.e. figs 1 and 9, output buffers) for delivery to output ports (i.e. fig. 1, output lines), and if the backlog reaches a particular level (i.e. col. 22, ll. 42-52, port is

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full), the output control (fig 1, bandwidth allocator), to enforce a rate limitation (i.e. fig. 9, col. 22, ll. 50-53; back pressure), wherein the additional data units in violation of the rate limitation are filtered (i.e. col. 22, ll. 53-66; violation of rate and filtered corresponds to full buffer means congestion and cells are dropped).

Regarding claims 2-9 and 11-22, Ramamurthy et al. disclose a switch including designate a priority (i.e. fig. 9, col. 22, ll. 42-67) and high priorities are not in violation while low priorities are (it is inherent that low priority cells are dropped first because higher priority implies more important and therefore the less important are dropped first); leaky bucket algorithm (i.e. col. 1, l. 50); when backlog falls, the output lifts the rate limitation (because after congestion and drops, it is inherent to start transmitting to output again at the prior uncongested bandwidth to try to maximize transmission rate); buffers are associated with both ports with distinct priority; and limitation is enforced at both ends (i.e. fig. 9, col. 22, ll. 42-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramamurthy et al. in view of Dighe et al.

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Regarding claim 23, Ramamurthy et al. disclose a switch comprising a plurality of input ports (i.e. fig. 1, 100); a plurality of output ports (i.e. fig. 1, output buffer); and switch fabric (i.e. fig. 1, buffered switch, core switch bus, core switch LSI); wherein the data stores are arranged to buffer data units (i.e. figs 1 and 9, output buffers) for delivery to output ports (i.e. fig. 1, output lines), and if the backlog reaches a particular level (i.e. col. 22, ll. 42-52, port is full), the output control (fig 1, bandwidth allocator), to enforce a rate limitation (i.e. fig. 9, col. 22, ll. 50-53; back pressure), wherein the additional data units in violation of the rate limitation are filtered (i.e. col. 22, ll. 53-66; violation of rate and filtered corresponds to full buffer means congestion and cells are dropped). Ramamurthy et al. do not specifically disclose transmitting and monitoring "Requests" to enforce a rate limitation. However, Dighe et al. teaches the usage of "Requests" to control the rate (i.e. RTS msg and CST msg). Therefore, it would have been obvious to an ordinary person skilled in the art at the time of the invention to include using these request messages as taught by Dighe et al. with the switch of Ramamurthy et al. in order to let the switch know there are cells ready to send and the desired rates and using that information to control congestion in the network.

Regarding claims 24-32, Ramamurthy et al. disclose a switch including designate a priority (i.e. fig. 9, col. 22, ll. 42-67) and high priorities are not in violation while low priorities are (it is inherent that low priority cells are dropped first because higher priority implies more important and therefore the less important are dropped first); leaky bucket algorithm (i.e. col. 1, l. 50); when backlog falls, the output lifts the rate limitation (because after congestion and drops,

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it is inherent to start transmitting to output again at the prior uncongested bandwidth to try to maximize transmission rate); buffers are associated with both ports with distinct priority; and limitation is enforced at both ends (i.e. fig. 9, col. 22, ll. 42-67).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Calvignac et al. is cited to show a scheduling method and apparatus for supporting ATM connections having a guaranteed minimum bandwidth.

b. Lee is cited to show an apparatus and method for determining a network node congestion state in order to control the congestion in an ATM network.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasper Kwok whose telephone number is (703) 305-0101.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen, can be reached on (703) 308-5340.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

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8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 305-3988 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Jasper Kwoh



January 28, 2001



MELVIN MARCELO
PRIMARY EXAMINER